287 Prevalence and importance of urinary incontinence in females with cystic fibrosis

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Objectives: To assess prevalence and importance of urinary incontinence in females (⩾12 years). Based on the result we will adjust and individualize our preventative treatment plan, in order to offer best possible treatment and support to prevent urinary incontinence.
Methods: A questionnaire designed to answer questions on prevalence of urinary incontinence and subjective experiences of urinary leakage was distributed to all females >12 years of age attending Gothenburg CF centre.
Results: Response rate until today is 48% (30/63), 25 of them >18 years, with a mean FEV_1 of 73% predicted. There were 20 (67%) responders (mean FEV_1 66% pred) who experienced urinary incontinence, two of which admitted limitations in participating in certain physical activities due to their urinary leakage. Five of them admitted frustration due to their urinary incontinence, and 2 out of these admitted social limitations and negative effects on mental health respectively. Ten (33%) responders (mean FEV_1 72% pred) denied urinary incontinence. Four out of 5 females <18 years admitted urinary incontinence, though not to an extent preventing them from participating in physical exercise.
Conclusion: Urinary incontinence is common already from childhood and may have negative impact on social, physical and psychological aspects of life.

288 Airway clearance techniques used by people with cystic fibrosis in the UK

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Background: There is large variation in airway clearance techniques (ACT's) used by people with CF (PWCF). However, the types of ACT's used in the UK have not been systematically explored.
Objectives:
1. Describe the ACT's used by adolescent and adult PWCF in the UK.
2. Explore the baseline characteristics of PWCF using different ACT's.
Methods: Demographic data, spirometry, annual total intravenous antibiotics days and primary ACT of all PWCF aged 11 years or older were obtained from the UK CF registry. These data were collected during annual reviews from January to December 2011. Descriptive statistics and comparison with results from other countries were performed.
Results: Forced expiratory techniques were the most common recorded form of primary ACT (28.1%), followed by oscillating positive expiratory pressure (22.8%) and exercise (15.9%). PWCF who did not use any form of ACT or used exercise as their primary ACT appeared to have the mildest lung disease based on % predicted FEV_1 (median 77.7%) and annual intravenous antibiotics days (median 0). PWCF using high frequency chest wall oscillation appeared to have the most severe lung disease, with median % predicted FEV1 of 62.5% and median annual intravenous antibiotics days of 25.5. The proportions of different ACT's used in the UK were broadly similar to Canada.

Table: ACT use in the UK compared with other countries

Airway clearance techniques	UK data (n = 6372)	Canada data (n = 2363), McIlwaine et al. 2008	Argentina data (n = 110), Ratto et al. 2012	US data (n = 204), Sawicki et al. 2009
Manual techniques (Postural drainage and Forced expiratory techniques)	32.5%	25%	86.3%	44%
Airway clearance devices (PEP and Oscillating PEP)	38.6%	48%	10.9%	15%
Other devices (e.g. high frequency chest wall oscillation)	1.8%	3%	Not available	37%

Conclusion: A number of factors at PWCF, therapist and country level may influence choice of ACT's used in the UK.
We thank the UK CF Registry for supplying the data for this analysis.

289 Ageing in cystic fibrosis: a comparison of adult patients attending a tertiary referral centre

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With improved survival, there are increasing numbers of CF patients who are adults. CF Registry of Ireland (CFRI) data shows 52.1% of the CF population to be 18 yrs and over. This study aims to describe the health status of the older CF population and compare these results with previously published data.
A retrospective chart-based review of patients 30 yrs and older attending Cork Adult CF Centre, CUH, was performed. Genotypic and phenotypic characteristics over a 12-month period were recorded. These variables were compared to previously collected departmental data and national/international reports.
25% (34/134) are 30 years and older. Of these, 56.5% have class 1–3 genotypic mutations, a lower proportion than departmental (74%) and CFRI (69%) data. 55.9% grew *Pseudomonas* in their sputum, lower than CFRI (65%) and Australian Registry (80–87%) reports. The mean age-of-diagnosis was 12.8 yrs; Canadian Registry data reports a mean of 3.2years. The median FEV_1 was 67% predicted (range 21–125%), greater than departmental (64%), CFRI (60%) and Australian Registry (55–65%) reports. The median BMI was 24 (range 17.9–31.2), greater than departmental (22.7) and Canadian Registry (21–23) data. There was a decreased prevalence of pancreatic insufficiency, and an increased prevalence of CF-Related Diabetes, 59% and 38% respectively, when compared to departmental data (82% and 22%), CFRI-data (90% and 26%) and the Canadian Registry (85% and 21%). 11.8% (4/34) are actively awaiting transplant.
25% of adult CF patients who attend CUH CF clinic are 30 yrs and older. This group of patients was shown to be an inherently different group to their younger adult counterparts.

290 Clinical characteristics of adolescents with cystic fibrosis in the Moscow region (Russia)

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Objectives: Adolescence – a certain period of life between childhood and adulthood is characterized by neuroendocrine changes, hormonal and metabolic features, intense growth processes and sexual maturation. In this period of life chronic diseases often have decompensation of organs and systems function that require special attention from the medical staff and parents. The aim was to investigate the clinical characteristics of CF in adolescents (15–18 years) of the Moscow region in 2010.
Methods: CF Patients' record notes were analysed. In 2010 160 CF patients were under the care.
Results: Among the CF population there were 42 adolescents (11.7%), 22 male patients, with the age at diagnosis of 3.9±1.6 years. That was significantly higher than in other age groups of children, but lower than in the group of adults ($p < 0.001$). The number of deaths in adolescents group was 12.5% of total deaths. In the group of adolescents there were less homozygotes for F508del (26.2%) compared with younger children (32.1%). Sweat Test chlorides in adolescents during the period of CF diagnosis were lower (84 [68.25–105] mmol/L) than in children under 1 year at the time of diagnosis – 107.5 [10–113.5] mmol/L ($p < 0.05$). Pancreatic insufficiency was present in 40 (95.24%) adolescents, in the group <3 years – in 100% and in adult patients (>30 years old) – 71.4%. 10% of adolescents were infected with *Burkholderia cepacia* comlex. There was an increased amount of diabetes and other complications of CF.
Conclusion: CF adolescents are characterized by several specific clinical features that should be carefully monitored during the regular clinical examination.